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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/872,271	06/01/2001	James S. Prater	NSC.01US01	2608

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EXAMINER	
WILLIAMS, LAWRENCE B	

ART UNIT	PAPER NUMBER
2611	

DATE MAILED: 11/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/872,271	PRATER, JAMES S.	
	Examiner	Art Unit	
	Lawrence B. Williams	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 January 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1,2 and 7-17* is/are allowed.

6)☒ Claim(s) *3-6* is/are rejected.

7)☒ Claim(s) *1,3-9,11-13,15 and 17* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Allowable Subject Matter

1. The indicated allowability of claims 3-6 is withdrawn in view of the newly discovered reference(s) to US Patent 6,369,644 B1. Rejections based on the newly cited reference(s) follow.

Claim Objections

2. Claim 1 is objected to because of the following informalities:

a.) Claim 1 recites the limitation " detecting the amplitude " in line 6. There is insufficient antecedent basis for this limitation in the claim. The examiner suggests, "detecting amplitude".

b.) Claim 1 recites the limitation " adjusting the amplitude " in line 8. There is insufficient antecedent basis for this limitation in the claim. The examiner suggests, "adjusting amplitude".

c.) Claim 1 recites the limitation "said wireless receiver circuit" in line 10. There is insufficient antecedent basis for this limitation in the claim. The examiner suggests "a wireless receiver circuit".

Appropriate correction is required.

3. Claim 3 is objected to because of the following informalities: Claim 3 recites the limitation "said receiver circuit" in line 8. There is insufficient antecedent basis for this limitation in the claim. The examiner suggests "a receiver circuit".

4. Claim 4 is objected to because of the following informalities: Claim 4 recites the limitation "said multistage filter" in line 4. There is insufficient antecedent basis for this limitation in the claim. The examiner suggests, "said multistage active filter".

5. Claim 5 is objected to because of the following informalities:

a.) Claim 5 recites the limitation "said active filter" in line 1. There is insufficient antecedent basis for this limitation in the claim. The examiner suggests, "said multistage active filter".

b.) The examiner suggests, "wherein **the** step of" in line 1.

6. Claim 6 is objected to because of the following informalities:

a.) Claim 6 recites the limitation "an active filter" in line 1. The examiner suggests, "a multistage active filter".

b.) The examiner suggests, "wherein **the** step of" in line 1.

7. Claim 7 is objected to because of the following informalities: Claim 7 recites the limitation "adjusting the sampling rate" in line 7. There is insufficient antecedent basis for this limitation in the claim. The examiner suggests, "adjusting sampling rate".

8. Claim 8 is objected to because of the following informalities:

a.) Claim 8 recites the limitation "detecting the amplitude" in line 3. There is insufficient antecedent basis for this limitation in the claim. The examiner suggests, "detecting amplitude".

9. Claim 9 is objected to because of the following informalities:

a.) Claim 9 recites the limitation "adjusting the amplitude" in line 3. There is insufficient antecedent basis for this limitation in the claim. The examiner suggests, "adjusting amplitude".

b.) Claim 9 recites the limitation "controls the gain" in line 5. There is insufficient antecedent basis for this limitation in the claim. The examiner suggests, "controls gain".

10. Claim 11 is objected to because of the following informalities: Claim 11 recites the limitation "adjusting the order" in line 6. There is insufficient antecedent basis for this limitation in the claim. The examiner suggests, "adjusting an order".

11. Claim 12 is objected to because of the following informalities:

a.) Claim 12 recites the limitation "detecting the amplitude" in line 3. There is insufficient antecedent basis for this limitation in the claim. The examiner suggests, "detecting amplitude".

12. Claim 13 is objected to because of the following informalities: Claim 13 recites the limitation "adjusting the amplitude" in line 3. There is insufficient antecedent basis for this limitation in the claim. The examiner suggests, "adjusting amplitude".

13. Claim 15 is objected to because of the following informalities:

a.) Claim 15 recites the limitation "with the amplitude" in line 5. There is insufficient antecedent basis for this limitation in the claim. The examiner suggests, "with amplitude".

b.) Claim 15 recites the limitation "with the amplitude" in line 8. There is insufficient antecedent basis for this limitation in the claim. The examiner suggests, "with amplitude".

c.) Claim 15 recites the limitation "determines the amplitude" in line 9. There is insufficient antecedent basis for this limitation in the claim. The examiner suggests, "determining amplitude".

14. Claim 17 is objected to because of the following informalities:

a.) Claim 17 recites the limitation "detecting the amplitude" in line 6. There is insufficient antecedent basis for this limitation in the claim. The examiner suggests, "detecting amplitude".

b.) Claim 17 recites the limitation "adjusting the amplitude" in line 8. There is insufficient antecedent basis for this limitation in the claim. The examiner suggests, "adjusting amplitude".

Claim Rejections - 35 USC § 102

15. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who

has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

16. Claims 3-6 are rejected under 35 U.S.C. 102(e) as being anticipated by Yoshizawa (US Patent 6,369,644 B1).

(1) With regard to claim 3, Yoshizawa discloses a method of actively filtering an input signal of an analog to digital converter circuit that may contain both a baseband signal component and a blocker signal component comprising: detecting the presence of said blocker signal component in said input signal (col. 4, lines 44-51); generating a control signal upon detection of said blocker signal component; applying an active filter to said input signal in response to said control signal (col. 4, lines (col. 4, lines 52-61) so that power consumption of a receiver circuit is minimized (col. 2, lines 9-21), said active filter being integrated into said receiver circuit (col. 1 lines 39-42).

(2) With regard to claim 4, Yoshizawa also discloses in Fig(s) 5, 6, 7 applying a multistage active filter (element 12) to said input signal in response to said control signal such that the number of filtering stages of said multistage filter that are used to filter said input signal varies in accordance with the amplitude of said control signal (col. 5, line 28-col. 6, line 3).

(3) With regard to claim 5, Yoshizawa also discloses in Fig(s) 5, 6, the method of claim 3 wherein the step of applying said active filter to said input signal comprises applying said active filter (element 12) to said input signal upstream from a variable gain amplifier (element 11) in said receiver circuit.

(4) With regard to claim 6, Yoshizawa also discloses in Fig(s) 5, 6, the method of claim 3 wherein step of applying an active filter (element 12) to said input signal comprises applying said active filter to said input signal downstream from a variable gain amplifier (element 11) in said receiver circuit.

Allowable Subject Matter

17. Claims 1-2, 7-17 are allowed.

18. The instant application discloses a method of preventing saturation of an analog to digital converter by an input signal that contains both a baseband signal component and a blocker signal component. A search of prior art records has failed to teach or suggest alone or in combination a method of preventing saturation of sn analog to digital converter by an input signal that contains both a baseband signal component and a blocker signal component comprising:
"oversampling said input signal; separating said blocker signal component from said input signal; detecting amplitude of said blocker signal component; separating said baseband signal component from said input signal; adjusting amplitude of a baseband signal component based upon said amplitude of said blocker signal component prior to application of said baseband signal component to a modem that controls the gain of a wireless receiver circuit so that said

gain maintains said input signal in a rangy that prevents saturation of said wireless receiver circuit" as disclosed in claim 1.

Nor does the prior art teach or suggest alone or in combination "a method of adjusting the dynamic range of a sampling circuit in a wireless receiver circuit to increase detection of a baseband signal component in an input signal that contains a baseband signal component and a blocker signal component comprising: separating said blocker signal component from said input signal, detecting the presence of said blocker signal component in said input signal; adjusting a sampling rate of said sampling circuit based upon the presence of said blocker signal component in said input signal such that said dynamic range of said sampling circuit increases whenever said blocker signal component is present" as disclosed in claim 7.

Nor does the prior art teach or suggest alone or in combination, "a method of adjusting the dynamic range of a sampling circuit in a wireless receiver circuit to increase detection of a baseband signal in an input signal that may contain a baseband signal and blocker signal comprising: separating said blocker signal component from said input signal; detecting the presence of said blocker signal component in said input signal; adjusting an order of operation of said sampling circuit based upon the presence of said blocker signal component in said input signal such that said dynamic range of said sampling circuit increases whenever said blocker signal is present" as disclosed in claim 11.

Nor does the prior art teach or suggest alone or in combination, "a wireless receiver circuit that automatically adjusts the gain of an input signal that contains both a baseband signal component and a blocker signal component to prevent saturation of receiver circuit comprising: a modem having a modem input that receives said baseband signal component and generates a

gain control signal that varies in accordance with the amplitude of said baseband signal; a variable gain control amplifier that controls the gain of said input signal in accordance with amplitude of said gain control signal; a blocker signal detector that determines the amplitude of said blocker signal component of said input signal and generates a digital level shifter control signal; a digital level shifter that shifts said amplitude of said baseband signal in accordance with said digital level shifter control signal so that said amplitude of said baseband signal that is applied to said modem is within a predetermined input range of said modem" as disclosed in claim 15.

Nor does the prior art teach or suggest alone or in combination, "in an analog to digital converter circuit, a method of ensuring detection of a baseband signal in an input signal that contains both a baseband signal component and a blocker signal component comprising: oversampling said input signal; separating said blocker signal component from said input signal; detecting amplitude of said blocker signal component; separating said baseband signal component from said input signal; adjusting amplitude of said baseband signal component to ensure proper detection of said baseband signal component while maintaining gain of said input signal in a range that prevents saturation of a wireless receiver circuit" as disclosed in claim 17.

Conclusion

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a.) Kahn discloses in US 4,192,970 Reduction Of Adjacent Channel Interference.

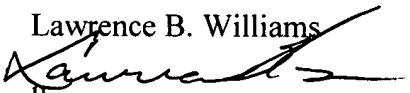
b.) Ghose et al. discloses in US Patent 3,699,444 Interference Cancellation System.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence B Williams whose telephone number is 571-272-3037. The examiner can normally be reached on Monday-Friday (8:00-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ghayour Mohammad can be reached on 571-272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lawrence B. Williams



lbw
November 12, 2006